

ABSTRACT

An antenna element is provided having a stacked patch configuration and having tuning structures by which the antenna element can be tuned at two different frequencies of operation. A plurality of the antenna elements can be combined to provide an antenna array. The antenna array can be provided having one or more surface wave surface wave control structures that isolate respective ones of the antenna elements from other respective ones of the antenna elements. The antenna element and/or the antenna array can be provided having RF feeds that can generate any pre-determined polarization.

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